

Claims

1. Towing arrangement for train coupler, comprising a bar (8), which at a rear end includes an axially projecting pin (10), which projects through a through hole (40) in a plate (11), which on both sides is surrounded by shock-absorbing spring members (12), which always aim to hold the pin in a starting position in relation to the plate, and against the action of which the pin together with the bar are axially movable, characterized in that said plate (11) is included in a mandrel (16) equipped with a cone (19), which mandrel is inserted into a deformation tube (17), more precisely into a wide, front tube section (22), which via a waist (23) transforms into a thinner, rear tube section (21), which is deformable by the penetration of the mandrel.
2. Towing arrangement according to claim 1, characterized in that the mandrel (16), in addition to said plate (11), includes a cylinder (18) extending rearward from the same, which in turn at a free, rear end has said cone (19).
3. Towing arrangement according to claim 2, characterized in that the plate (11) and the cylinder (18) are made integrally from a first material, while the cone consists of a ring (19) that is of a second material and formed with a conical surface (20), which second material has greater compression strength than the first-mentioned one.
4. Towing arrangement according to any one of the preceding claims, characterized in that the mandrel (16) in a primed starting position is kept in place in the deformation tube (17) by means of a clamp ring (32), which, on one hand, prevents the mandrel from moving axially forward out of the tube as long as the mandrel is influenced by moderate forces only, but on the other hand freely allows the mandrel to move rearward from the same into the thin section (21) of the tube (17), so as to deform the

same, if the mandrel is subjected to considerable compressive forces.

5. Towing arrangement according to claim 4, characterized in that the clamp ring (32) is connected to the deformation tube (17) via a threaded joint in the form of a male thread (33) on the outside of the ring and a female thread (31) on the inside of the tube, the clamp ring having the purpose of, in the starting position, holding the cone (19) of the mandrel pressed, free of play, against the waist (23) between the thin and wide, respectively, sections (21, 22) of the tube.

10 15. Towing arrangement according to claim 4 or 5, characterized in that the mandrel (16) at a front end (34) has a circumferential groove, into which an internal part of the clamp ring (32) engages.

20 25. Deformation tube for towing arrangement for train coupler, characterized in that the same has a cylindrical basic shape and comprises a rear section (21), which via a conically widening waist (23) transforms into a wider front section (22), to which a flange (25) is united for the fixation of the deformation tube in a frame or chassis of a vehicle unit, and that internally in the wide, front section, there is means (31) in order to secure a clamp ring (32).

30 8. Deformation tube according to claim 7, characterized in that said means consists of a female thread (31) arranged to co-operate with a male thread (33) of the clamp ring (32).